REMARKS

Claim 32 was rejected under 35 U.S.C. 112. Applicant appreciates the examiner's noting the error in the claim wording. It is believed that the above amendment overcomes the rejection.

Each claim was rejected under 35 U.S.C. 103 as being unpatentable over Goldfine et al. in view of Zaretsky et al., alone or in combination with Clark or Waldman et al. The rejections are respectfully traversed and reconsideration is requested.

The present claims relate to methods for generating property estimation grids. Only Goldfine et al. suggests property estimation grids and thus only Goldfine et al. is relevant to the claimed invention. Whereas Goldfine et al. related to estimation grids used with magnetometers, the present invention is directed to measurement grids used with dielectrometers. That distinction alone is sufficient to distinguish the subject claims since, as discussed in the application, dielectrometers present significantly different considerations. However, each of the claims further distinguishes Goldfine et al. for other reasons.

Claim 2 is best analyzed with reference to Figure 21 of the present application. Note that the X and Y axes refer to the capacitance with respect to far and near measurements. In practice, those distinct depth measurements are obtained by utilizing distinct sensors having different special wavelengths, but other mechanisms for obtaining distinct field penetration depths are available. In accordance with the method of claim 2, one would identify two material properties, such as lift off and epsilon in Fig. 21, that define a grid point. A terminal relation value, e.g. capacitance in Fig. 21, is then computed for each of the penetration depths. The computed values for the respective penetration depths are plotted on the X and Y axes. In subsequent use of the estimation grid, it is the capacitances that are measured to provide the lift off and epsilon values from the estimation grid.

In Goldfine et al., the computed parameters would be associated with a single sensor and single penetration depth. For example, the X and Y axes would be magnitude and phase for that

single sensor output. By contrast, with the present invention, distinct terminal values for respective penetration depths are computed and plotted on the separate axes. Thus, claim 2 distinguishes Goldfine et al. not only in reference to a dielectrometer, but also in the recitation of computation of "a terminal relation value for each penetration depth" and "recording in a database the terminal relation value for each penetration depth relative to the material properties as a property estimation grid point." Computation of terminal relation values for each of two penetration depths is not suggested by Goldfine et al.

Although Zaretsky et al. relates to a dielectrometer, Zaretsky et al. does not generate a property estimation grid and more particularly does not compute terminal relation values for plural penetration depths to obtain a property estimation grid point.

Claim 10 is best discussed relative to Fig. 7. Whereas claim 2 was directed to computation of an estimation grid relative to two penetration depths, potentially detected using two dielectric sensors, Fig. 7 relates to an estimation grid defined relative to two completely distinct sensors. As recited in claim 10, a terminal relation value is computed for each a dielectric sensor and a non-dielectric sensor (such as a micrometer for Fig. 7). One axis of the property estimation grid represents a parameter measured with the dielectric sensor, and the second axis represents a parameter measured with the non-dielectric sensor. As previously discussed, Goldfine et al. prepared estimation grids only with respect to a single magnetometer sensor. Nor did Zaretsky et al. suggest generating a property estimation grid relative to both the dielectric sensor and a non-dielectric sensor.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By _____
James M. Smith
Registration No. 28,043
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133
Dated: 2/7/5